

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference P23654PCAU	FOR FURTHER ACTION See item 4 below	
International application No. PCT/AU2005/000306	International filing date (<i>day/month/year</i>) 03 March 2005 (03.03.2005)	Priority date (<i>day/month/year</i>) 03 March 2004 (03.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).																	
2.	This REPORT consists of a total of 5 sheets, including this cover sheet. In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.																	
3.	<p>This report contains indications relating to the following items:</p> <table> <tr> <td><input checked="" type="checkbox"/> Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/> Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/> Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/> Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/> Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/> Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/> Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/> Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>		<input checked="" type="checkbox"/> Box No. I	Basis of the report	<input type="checkbox"/> Box No. II	Priority	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/> Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/> Box No. VI	Certain documents cited	<input type="checkbox"/> Box No. VII	Certain defects in the international application	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
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4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).																	

	Date of issuance of this report 05 September 2006 (05.09.2006)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Dorothee Mülhausen
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PATENT COOPERATION TREATY

REC'D 12 APR 2005

From the:
INTERNATIONAL SEARCHING AUTHORITY

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To: WATERMARK PATENT & TRADEMARK ATTORNEYS Locked Bag 5 HAWTHORN VIC 3122			Date of mailing <i>(day/month/year)</i> 07 APR 2005
Applicant's or agent's file reference P23654PCAU		FOR FURTHER ACTION See paragraph 2 below	
International application No. PCT/AU2005/000306	International filing date <i>(day/month/year)</i> 3 March 2005	Priority date <i>(day/month/year)</i> 3 March 2004	
International Patent Classification (IPC) or both national classification and IPC Int. Cl. ⁷ C08G 18/10; C09D 167/07, 175/16; C09J 167/07, 175/16			
Applicant COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION et al			

1. This opinion contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|--|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the opinion |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustalia.gov.au Facsimile No. (02) 6285 3929	Authorized Officer N.L. KING Telephone No. (02) 6283 2150
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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/AU2005/000306

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	YES
	Claims 1-14	NO
Inventive step (IS)	Claims	YES
	Claims 1-14	NO
Industrial applicability (IA)	Claims	YES
	Claims 1-14	NO

2. Citations and explanations:

- D1 WO 2002/010292
- D2 US 4451523
- D3 US 4424252
- D4 US 4035274
- D5 US 2003/0153673
- D6 Demarteau et al. Dual UV/Thermally curable Formulations
Radcure '84 Conference Proceedings, pages 1-1 to 1-10
- D7 Ichinose et al. Study of Hybrid Curing Behaviour of Radiation Curing Systems
Radtech '91 Conference Proceedings, pages 738 to 752
- D8 US 6124370
- D9 US 5276068

NOVELTY(N) Claims 1-14

Claim 1 defines a polymer composition comprising a base molecule, a linker molecule and an initiator. The base molecule has at least two different functionalities. The linker molecule reacts with at least one of these functionalities in a first curing stage. Further curing is provided by the additional functionality on the base molecule. The composition is useful in coating applications and for fabricating rigid foams. Claim 10 defines a prepolymer formed in a first curing stage as described above while claim 11 defines an end product, this being the result of further curing wherein the initiator is activated to affect free radical polymerisation of at least the second functionality on the base molecule.

Closely-related art appears in each of the above citations.

In the coating composition described on page 77 of D1, the base molecule is the acrylic polyol resin, the linker is the isocyanurate of HDI and the photoinitiator is phosphine oxide.

In D6 the base molecule is an isocyanate acrylate prepolymer, the linker is a diol or triol and the initiator is Irgacure 651.

In Scheme 1 of D7 the base molecule is hydroxyethylacrylate, the linker is isophorone diisocyanate and the initiator is hydroxycyclohexyl phenyl ketone.

In D8 foams are formed from base molecules having groups which participate in a first-stage cure with the linker trimethylolpropane trimethacrylate, as well as silane groups which are involved in a second-stage cure with water.

In the preferred embodiment for a dental adhesive described in column 9 of D9, the base molecule is hydroxyethylmethacrylate (also one of the base molecules on page 16 of the present application) and the linker is polycarbonate dimethacrylate. The initiator is camphorquinone and DMAEMA (as used in Examples 16-21 of the present application).

Additional features defined in dependant claims are also to be found in D1 to D9.

Consequently, claims 1-14 lack novelty when compared to each of the above citations.

WRITTEN OPINION OF THE
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International Application No.

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Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: V

INVENTIVE STEP(IS) Claims 1-14

In view of the above, claims 1-14 also lack an inventive step when compared to each of D1 to D9.